

ABSTRACT OF THE DISCLOSURE

Novel lines of *Brassica juncea* yield an edible oil that has properties similar to canola oil. More specifically, the oil has an oleic acid content of at least 55% by weight, a linoleic acid content of less than 25% by weight, a linolenic acid content of less than 14% by weight, a erucic acid content of less than 1% by weight, a palmitic acid content of less than 6% by weight, a stearic acid content of less than 2.5% by weight, and a total saturated acid content of less than 7.1% by weight. The novel lines of *B. juncea* plant have a lineage that includes both lines J90-3450 and J90-4316, these being known lines of *B. juncea*, and may be formed by conventional cross fertilization or other means. The novel lines can be grown in harsher environments than conventional canola species and are high-yielding and disease-resistant.